DOCUMENT RESUME

ED 093 142 EC 062 413

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|---|---|
| TITLE | Classes for Doubly Handicapped Children. Final Report. |
| INSTITUTION | Teaching and Learning Research Corp., New York, N.Y. |
| SPONS AGENCY | Bureau of Elementary and Secondary Education (DHEW/OE), Washington, D.C. |
| PUB DATE | [73] |
| NOTE | 56p.; Function No. 09-39608 |
| EDRS PRICE | MF-$0.75 HC-$3.15 PLUS POSTAGE |
| DESCRIPTORS | Exceptional Child Education; Mentally Handicapped; *Multiply Handicapped; *Physically Handicapped; *Program Descriptions; School Districts; *Special Classes; *Trainable Mentally Handicapped |
| IDENTIFIERS | Elementary Secondary Education Act Title I; ESEA Title I; New York City; Severely Handicapped |

ABSTRACT

Presented is the final report of a 1-year New York City program of 18 special classes for 133 doubly (physically and mentally) handicapped children, 5-20 years of age. Noted are criteria for student selection such as IQ below 75, the presence of one or more physical handicaps, and completion of toilet training. It is reported that most pupils selected were from disadvantaged backgrounds. Objectives of the program included improvement in self-help, academic, and social skills; and optimum integration into the larger school program. Major findings discussed are administrative difficulties in screening 100 percent of the children on the waiting list, significant improvement in self-help skills by 62 percent of the children, significant improvement in academic skills by 74 percent of the children, improvement in social skills by 63 percent of the students tested, and participation by most of the children in the larger school program. Recommendations provided include the provision of additional staff and equipment, extension of the integration component to more intensively involve pupils with regular class students, and continuation of the program for the 1973-74 school year. (DB)

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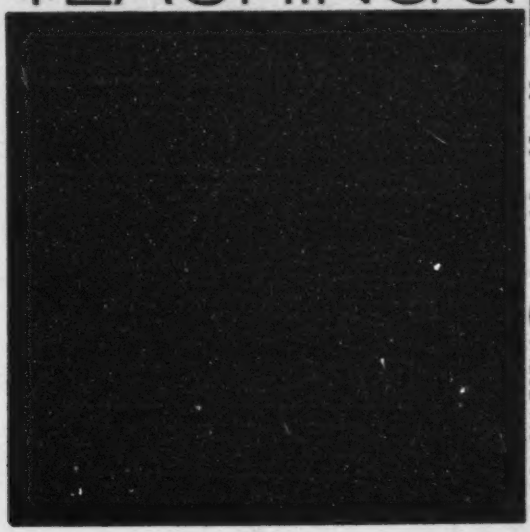

# CLASSES FOR DOUBLY HANDICAPPED CHILDREN

**Board of Education of the City of New York**

**FINAL REPORT**

BC062415

91-31 QUEENS BOULEVARD / ELMHURST, NEW YORK / 11373 / 212 - 478 - 4340

ED 093142

Function No. 09-39608

# FINAL REPORT

# CLASSES FOR DOUBLY HANDICAPPED CHILDREN

An evaluation of a New York School District education project funded under Title I of the Elementary and Secondary Education Act of 1965 (PL 89-10), performed under contract with the Board of Education of the City of New York for the 1972-73 school year.

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91-31 Queens Boulevard
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ACKNOWLEDGMENTS

The authors of this report wish to express their appreciation for the cooperation and assistance of Dr. Claire Wishart, Coordinator of Title I and Mrs. Mildred Hamberg, Program Coordinator.

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## EXECUTIVE SUMMARY

The classes for Doubly-Handicapped Program was designed to fulfill the educational and social needs of one hundred eighty children (180) who have severe physical handicaps in addition to mental retardation. These children were unable to attend classes for the physically handicapped or classes for the retarded because of their multiple disabilities. The program was directed and supervised by the coordinator. A teacher-trainer worked directly with the eighteen teachers. The program was also staffed by nineteen paraprofessionals, three speech therapists and a consulting occupational therapist. One full-time psychologist, two part-time psychologists and a social worker were employed in the program and supervised by the Bureau of Child Guidance. A family worker was also a part of this mental health team.

The entire staff served one-hundred thirty-three children during the school year (1972-73). The eighteen classes were located in eight schools apportioned among the five boroughs of New York City.

The main objective of the program was to admit disadvantaged doubly-handicapped children to a school setting and ultimately integrate this population into the larger public school population. Specific program objectives present-d in the funding proposal and in relation to which the evaluation was conducted were:

1. 100% of the children on the waiting list will be screened.
2. 80% of the children on the waiting list will be accepted.
3. 80% of the pupils will improve in self help skills.
4. 20% of the pupils will improve in academic skills.
5. 100% of the pupils will participate in the larger school program.
6. 80% of the pupils will have improved in socialization and maturation as assessed by the Vineland Social Maturity Scale, teacher's anecdotal and cumulative records, classroom observations by the mental health team, or parent interviews.

The major findings and conclusions from the assessment procedures for each objective were:

1. The evaluation of the objective that 100% of the children on the waiting list would be screened for placements was impossible to implement as per the original evaluation design. Necessary waiting lists were unavailable. At the onset of the evaluation (the evaluation began in January, 1973 because of late approval by the Board of Education) 74% of the children in the program had already been accepted.

2. The evaluation of the objective that 80% of the children on the waiting list would be accepted was also impossible to implement as stated. Waiting lists were unavailable and 74% of the children in the program had already been accepted by the time the evaluation was initiated.

3. Statistical analysis of the T.M.R. Performance Profile showed significant favorable differences between the pre and post scores for self-help skills. Sixty-two percent of the 104 children assessed, nearly half of the total number of children in the program, showed improvement in self-care skills. Observations and interviews suggested more general improvement. Parent's perceptions supported this conclusion.

4. Improvement in academic skills as determined by the Inventory of Readiness Skills was statistically significant. Seventy-four percent of the 98 children assessed (over half of the total number in the program ) improved. Classroom observations also confirmed improvement.

5. Most of the children in the program participated in the larger school program by attending school assemblies and using general school facilities. A few classes were exceptionally well integrated into the general program.

6. Statistical analysis showed significantly favorable differences between pre and post scores for the 105 children assessed in socialization and maturation by the T.M.R. Performance Profile. Sixty-three percent of the students tested and at least half of the total number of children in the program demonstrated improvement. Parent questionnaire results gave indication of marked improvements by children from the parents' perspective. Observations and interviews also disclosed improvement.

Major recommendations included:

a. Additional staff is needed, particularly permanent occupational therapists, physical therapists, psychologists, social workers and family workers.

b. Equipment such as plants, caged animals, audio-visual aids and other remedial aids for the physically and mentally impaired should be obtained.

c. Integration of the DH classes should be extended to more intensively involve the children with regular class students.

d. It is recommended that the program be continued for the 1973-74 school year.

# Chapter I

## PROGRAM DESCRIPTION

### PURPOSES

The Doubly-Handicapped program was primarily designed to fulfill the educational and social needs of one-hundred eighty disadvantaged children who have severe physical handicaps in addition to mental retardation and who were therefore unable to attend either classes for the physically handicapped or classes for the retarded. Board of Education records show that at least two-hundred fifty children require such service and the 1971-72 program was designed to serve one-hundred of them. It was proposed that the program be expanded for 1972-73 to accommodate one-hundred eighty physically handicapped children with trainable and low educable levels of mental retardation. Ungraded classes were to range from the pre-kindergarten level to third grade with independent self-care and pre-vocational skills emphasis. The staff-participant ratio in project activities was designated as one-to-four with speech remedial services, occupational, physical and psychotherapy available.

### OBJECTIVES AND GOALS

The main objective of the program is to admit disadvantaged doubly-handicapped children to a school setting and ultimately integrate this population into the larger public school population. Thus, interaction with other disabled as well as the physically intact children was an important goal of this program. It has been found that many handicapped retarded children suffer from a lack of stimulation and socialization which further complicates their retardation. This is primarily due to their retention at home by parents who are hesitant in entrusting their child's complexity of medical problems and the care of him to others.

The specific program objectives are:

1. 100% of the children on the waiting list will be screened.
2. 80% of the children on the waiting list will be accepted.
3. 80% of the pupils will improve in self-help skills.
4. 20% of the pupils will improve in academic skills.
5. 100% of the pupils will participate in larger school programs.
6. 80% of the pupils will have improved in socialization and maturation as assessed by the Vineland Social Maturity Scale, teachers' anecdotal and cumulative records, classroom observations by the mental health team, or parent interviews.

### SELECTION PROCEDURES

Prerequisites for admission to the program for the Doubly-Handicapped Handicapped for the year 1972-73 were:

1. Mental retardation, I.Q. below 75.

2. One or more physical handicaps. Such handicaps and disabilities may include epilepsy, cerebral palsy, muscular dystrophy, spina bifida, hydrocephalia, tuberous sclerosis, sickle cell anemia, vision and hearing impaired.
3. Those children who entered the program for the 1971-72 school year were required to have a Bureau of Child Guidance (BCG) psychological and a Department of Health/Board of Education Medical Report. This requirement was sustained for children entering the program during the 1972-73 school year.
4. That the child be toilet-trained was also a requirement.

Children were referred for placement from various sources and thus placed on waiting lists which were generally tallied bi-monthly. Sources of referrals consisted of those children from Home Instruction involvement; children who had no previous schooling; children who were inappropriately placed in classrooms those who had previously been in private schools; those referred from hospitals, clinics and the United Cerebral Palsy units.

Children were screened by the mental health team--the psychologist and social worker. Excluded, immediately, were those children who were absolutely not toilet trained and/or could not adapt to the public school classroom situation. These and others were screened also through records submitted (paper-screened). Others were excluded from formal screening because of lack of space (no available appropriate classroom) and insufficient data.

Upon examination of psychological reports and other background material of a candidate, an interview with the parent and child in the school was prescribed. Parent and child thus had an opportunity to visit the school and classroom beforehand. The children were placed in the available schools according to their residential location, chronological age and level of functioning. Placement where space allowed seemed to have been a major variable.

Screening procedures began for 1972 - 73 school year placements in June, 1972. These were discontinued from February 26 to the middle of May due to the necessary completion of psychological summaries by the mental health team. Procedures resumed after this time until June, 1973.

STUDENT POPULATION

One-hundred thirty-three (133) children who were doubly-handicapped were placed during the school year. There are presently one-hundred thirty-two children in eighteen classes in eight schools located throughout five boroughs of the city. The children ranged in age from five to approximately twenty years with ninety-three at the elementary school level and thirty-nine at the junior high school level. The range of physical disabilities included total wheelchair-bound involvement of all extremeties with dependency in eating, toileting; those with sensory impairments to ambulatory and ostensibly intact children with grand mal seizures. Though it was probably true of many of the children to some degree, there were some who are considerably emotionally

disturbed. A majority of the children were from low-income or welfare families and of minority ethnicity. Many of the children were cerebral-palsy victims. Their capacities ranged from low trainable in degenerative states to clearly educable levels of functioning.

SITES

Schools participating in the program, Classes for the Doubly-Handicapped are as follows:

| District | School | Number of DH-Classes |
|---|---|---|
| 2 | P.S. 33M<br>281 Ninth Avenue<br>Manhattan 10001 | 3 |
| 11 | P.S. 160X<br>Hutchinson River Pkwy.<br>and Einstein Loop<br>Bronx 10475 | 2 |
| 11 | I.S. 144X<br>2545 Gunther Ave.<br>Bronx 10469 | 2 |
| 15 | P.S. 230 K<br>1 Albemarle Road<br>Brooklyn 11218 | 2 |
| 22 | P.S. 52K<br>2675 East 29th st.<br>Brooklyn 11235 | 4 |
| 25 | P.S. 201 Q<br>65-11 155th St.<br>Flushing, N.Y. 11367 | 2 |
| 25 | I.S. 237 Q<br>46-21 Golden St.<br>Flushing, N.Y. 11355 | 1 |
| 31 | P.S. 3 R<br>80 South Goff Avenue<br>Staten Island, N.Y. 10309 | 2 |

Most of the eighteen Doubly-Handicapped classes were located in modern school buildings. The classes were located on the ground floors of the eight schools because of the necessity for mobility of the non-ambulatory children. Many classes were located near the exits of the building which was appropriate for access to the buses. Ramps were provided at the exits where necessary for the support of wheel-chair bound children. In one school, hand-bars had been installed by the school for physically-handicapped classes near the exit and classrooms. Two schools had elevators which facilitated mobility within the larger school. The ground floor location of the classes was conducive to the integration of the children within the larger school in that lunchrooms, auditoriums, gyms, restrooms and music rooms were nearby. The Doubly-Handicapped classes in one particular school had an entrance to the school playground.

In other schools, media rooms, wood and ceramic workshops were available. There was essentially only one school where the atmosphere was dismal and the location of the classes fostered isolation from the rest of the school.

Most classrooms were spacious but one classroom was too small for wheel-chair bound children. The children's work was exhibited in many classrooms along with instructional exhibits. The newer classes were relatively bare and were in need of more equipment. One teacher expressed her feeling that the furniture was not suitable for the children, but there seemed to have been no general problems in this regard.

Most classes were fairly homogeneous. Several teachers, however, felt their classes were too heterogeneous in terms of the functional levels of the children. One school remains somewhat disordered in this respect in that adolescent pupils were placed in an elementary school setting due to the lack of an appropriate school and class in that borough.

BUSING

Initially, busing of the children to the schools was a consistent problem according to information from the coordinator. One basis for the problem was the delay in obtaining the list of children who were to be bused to the Bureau of Transportation. Through pressure from parents, busing was obtained. For some time, children were arriving either too early or too late for classes. This matter has been largely elimiated. A new list of one-hundred thirty-nine children was submitted at the end of May, 1973. Problems inherent to a late list should therefore not exist for the coming year. However, one particular school still has a minor busing problem--teachers must be available a half hour before and after classes due to an unsuitable bus schedule and route for their pupils.

STAFF

The proposed and existing staff included (as given through proposal, interviews and observations):

Program Coordinator: The coordinator largely acted as a liaison between the evaluator and the constituents of the program in making contacts for school visits, giving information. Her major program role is to be responsible administratively for the operation of each unit and supervision and training for the staff for doubly-handicapped children.

Teacher-trainer: The teacher-trainer's role consisted of observing, instruction, checking the teachers' lesson plans and giving them ideas. Visits were made to each of the eight schools about two or three times a month.

Speech-Therapist: Three speech therapists were available for the one hundred thirty-three children during the year. Each unit was visited one to three times per week.

Occupational and Physical Therapists: It was proposed that one occupational therapist and one physical therapist provide therapy to the pupils in the schools. One occupational therapist was hired but resigned after a three month period. Although a physical therapist was proposed, one could not be hired because of salary. There was one occupational therapist who acted as a consultant to the coordinator for the program. Hospital affiliation was suggested on a trial basis. Some hospital service has already been provided during the year in that ambulances were made available in emergencies.

Psychologist-Social Worker: A full-time psychologist and a social worker were available servicing equal numbers of children. The mental health team was largely unable to provide services prescribed in the proposal at an intensive level because of delays and preoccupation with screening procedures which really required the work of more persons. However, they conducted workshops for parents in three of the boroughs since the month of April. Both were supervised by the Bureau of Child Guidance. Two part-time psychologists were hired in mid-May and were involved in testing, screening, visiting institutions for referrals and aiding the original mental health team meet criteria.

Family Worker: One family worker was employed and was largely available only for the one borough in which she was trained. Only in extreme cases was she available to other borough units. Having bilingual skill, she contacted parents regarding their children's medical needs and helped the families in welfare concerns, housing, and adjustment.

Teachers: Eighteen teachers were involved in the program. The background of the teachers varied from training in special education to rehabilitation counseling. Most of the teachers had common branch licenses. All had taken examinations for the CRMD license.

Paraprofessionals: There were nineteen paraprofessionals in the program, one of these acting as a substitute. In general, these aides assisted in classroom activities, helped with lunch, clean-up, dismissal, transportation and in other routines.

CURRICULUM

It was proposed that the curriculum for the Doubly-Handicapped classes be derived from the CRMD core curriculum which emphasizes home, family instruction, reading, math, arts and crafts and health education. However, many teachers found their pupils to be too low-functioning for the subject matter. Some children had had no previous academic training. Emphasis in these cases was on pre-readiness with instruction in body image, basic knowledge and primary academic skills.

MATERIALS

The equipment, instructional materials, and supplies allocation was set at $12,000. Purchased during the year were the following items:

| | | | |
|---|---|---|---|
| extra size mats | 9 | resting mats | 24 |
| trapazoid tables | 20 | coaster sled and seat | 15 |
| sand and water tables | 6 | button aides | 18 |
| cots | 18 | phonographs | 3 |
| rhythm outfits | 18 | tape recorders | 3 |
| movie camera | 1 | filmstrip projector | 3 |
| movie projector | 1 | textbooks | 19 |
| cutout tables | 6 | hotplate | 1 |
| folding chaises | 8 | toaster oven | 1 |

Classroom equipment such as school supplies and toys was adequate in most schools (although many teachers received equipment late in the year). However, some equipment was not supplied to any of the schools, for example:

a) Fish tanks.

b) Only two classes had animals and cages as science materials.

c) A few classes had plants which were not supplied through the program.

d) Equipment for physical or occupational therapist in treatment. This was largely due to the absence of a physical and occupational therapist.

## Chapter II

## EVALUATION OBJECTIVES: METHODS AND PROCEDURES

The basic objectives, procedures, and time schedule were prepared by a staff menber of the Bureau of Educational Research. Because the evaluation was not approved of until the latter half of the school year (see Dates of Execution section), the time schedule designated in the proposal could not be fulfilled.

OBJECTIVE I

The first objective to be evaluated was that 100% of the children on the waiting list will have been screened for placement in Doubly-Handicapped classes. From the proposal:

Subjects - 100% of the pupils.

Methods and Procedures - All teacher-pupil records as well as the waiting list will be used to determine who was screened as well as how many were included and excluded.

Statistical and/or Qualitative Analysis - Frequency distributions and percentages will be computed.

Time Schedules - The waiting list will be examined during the first two weeks the pupil records will be tallied.

Because screening procedures persisted throughout the year with the exception of the period from February to mid-May, the pupil register and waiting lists were to have been secured dating from the first two weeks in which pupil records were tallied to the latest available waiting list. Each list was to have been examined and tabulated as follows:

a) date of the waiting list
b) the number of children formally screened*
c) the number of children who were not formally screened
d) the total number of children on the list
e) the computed percentage of those children who were formally screened

The examination consisted of investigating the disposition of all children placed on the waiting list (N = 130) and a comparison with those children listed on the pupil register (N = 133). The first authorized waiting list was not available until February 2, 1973. Ninety-nine children, as of January 31, 1973 had already been placed on the pupil register. The latest available list was from the end of March. Because the first waiting lists were not available, this objective could not be carried out to par. Waiting lists devised after March consisted only of numerical listings since the program was not authorized to list referrals by name after that time. Also, given that ninety-nine children (74% of the program's total) were already on the pupil register before the first available waiting list was devised, it would not have been feasible to have made an evaluation for screening 100% of the children on the waiting list.

OBJECTIVE II

The second objective proposed for evaluation was that 80% of the children on the waiting list will be accepted.

From the proposal:

Subjects - 100% of the students

Methods and procedures - The records of all the students will be evaluated

Statistical and Qualitative Analysis - Frequency distributions and percentages will be computed

Time Schedules - Examination of records will be tallied during the first two weeks.

* A distinction must be made as to formal and informal screening procedures. Most of the children were at least paper screened, i.e., through records sent for them, indications were that they were not suitable for the program. This paper screening can be regarded as informal screening. Other reasons for not formally screening all children on the waiting list were that no appropriate space was available because of the child's age; some children did not live in the Title I areas; some children did not have all materials and for other reasons, the child was not suitable for the program. Formal screening procedures included actual contact with the child and a thorough investigation of his potential for the program.

The pupil register consisting of all the children who had been in the Doubly-Handicapped classes over the school year, 1972-73, (N = 133) and the waiting lists dating from the first two weeks in which the pupil records were tallied to the latest available waiting list were to have been examined. From these records, a tabulation was to have been made to determine:

a) date of the waiting list
b) total number of children on the waiting list
c) the number of children who were accepted
d) the number of children who were not accepted
e) percentage of children on the waiting list who were accepted

A number of children who were given formal screening appointments who might have been accepted did not appear for appointments. These children had to be re-scheduled. Others who were accepted were withdrawn by their parents who had other preferences. The first authorized waiting list available was February 2, 1973, the last, through March (N = 130). Ninety-nine children had already been placed on the pupil register. Ninety (90%) percent of the children formally screened had been accepted into the program, according to the program coordinator.

Because the waiting lists for the first intakes were not available, this objective could not be carried out to par to determine what percentage of the children on the waiting lists had been accepted. The waiting lists devised after March, consisted only of numerical listings without the present disposition in the program designated. Given that ninetynine children (74% of the program's total) were already on the pupil register before the first available waiting list was devised, it would not have been appropriate to have made an evaluation for the acceptance of 80% of the children on the waiting list.

OBJECTIVE III

The third objective given in the proposal to be evaluated was that 80% of the pupils will improve in self-help skills.

From the proposal:

Subjects - 100% of the pupils

Methods and Procedures - The TMR Performance Profile will be used as well as interviews (including parents), anecdotal records, observations.*

Statistical and Qualitative Analysis - Frequency distributions and percentages will be computed and comparisons will be made on the same children.

*Modifications were made in the design for use of the TMR Performance Profile. A letter concerning the replacement of the Vineland Social Maturity Scale with this test was sent to the Division of Research and Evaluation of the State Education Department by the Bureau of Educational Research at the request of the Program Coordinator.

All teachers were interviewed during site visits and their opinions concerning the improvement they had seen in their pupils from the time they first arrived to the present were obtained. However, most teachers did not keep anecdotal records and the pertinent information these records might have contained was largely unavailable.

Observations of the children's abilities in helping themselves were also made during visits to all classrooms.

Objective IV

The fourth objective to be evaluated in the proposal was that 20% of the pupils will improve in academic skill or by indicating significant positive trend of improvement.

From the proposal:

Subjects - 100% of the students

Methods and Procedures - Acadmic skills will be measured by the Inventory of Readiness Skills.5

Statistical and Qualitative Analysis - Medians, standard deviations will be compared as well as percentages for significant differences or positive trends.

Time Scehdule - The selected standardized instrument will be administered during the first two weeks and last two weeks of the program to the same tudents.

The Inventory of Readiness Skills*was administered by teachers individually to one-hundred seven pupils in seventeen of the Doubly-Handicapped classes during the period, February 6 through February 26, 1973. Scores from this testing period were used as the pre-test scores. The Inventory of Readiness Skills was again administered on the same previous basis to one-hundred ten pupils in seventeen of the Doubly-Handicapped classes through the month of May. These scores were used as the post-test scores. The number of administered tests differed from the total number of children who had been placed in the eighteen classes due to physical or other disabilities interfering with the testing process; transfers from the program, absenteeism and new placements; and one particular class, becaused of the teacher's preference. Thus 100% of the population could not be used for the sample. Only those children (74%) whose scores could be matched as pre-and post-test scores were used as subjects (See Appendices C and D).

*Modification was made in the design to use the Inventory of Readiness Skills instead of the WRAT or Metropolitan. A letter concerning this change was sent to the Division of Research and Evaluation of the State Education Department by the Bureau of Educational Research at the request of the Program Coordinator.

The pre-and post-test scores for ninty-eight children (N = 98) were analyzed by a Correlated t test, $p < .05$, for mean differences. A frequency distribution (See Table 6) was compiled of all pre-post test scores. The percentages of those children whose post-test scores were greater than their pre-test scores (improvement) and the percentages of those whose post-test scores showed no change or were less than the pre-test scores were computed (See Table 7).

The Prereading Assessment was administered to five children in one class on an individual basis by the teacher during the first testing period. The test was again administered to six children in the class during the post-testing period. The pre-test scores (first testing period) and the post-test scores (second testing period) were analyzed by a t-test of paired observations. The Prereading Assessment is a two-part test. For part I (Language) scores were matched for five children, N = 5 and analyzed by the t-test, $p < .05$. Part II (Visual Discrimination) scores were matched for three children, N = 3 and analyzed by the t-test, $p < .05$. Frequency matrices were devised showing increase, decrease or no change in pre-post-test scores (See Appendix C). Charts of the scores were also made. This test, Prereading Assessment was not useful in the evaluation of the objective within the total population but did reveal information.

Observations of academic involvement of the students were made during the site visits to each of the eight schools and eighteen classrooms.

Objective V

The fifth objective to be evaluated from the design was that participation in the larger school program was expected of 100% of the pupils.

From the proposal:

Subjects - 100% pf the pupils

Methods and Procedures - Observations and questionnaires will be used to determine the participation of the students in the larger school program.

Statistical and Qualitative Analysis - Frequency distributions and percentages will be computed.

Time Schedule - From the start to the end of the program and during the last two weeks questionnaires will be administered to all participants including parents as well as a random group of regular students in the regular school program.

A questionnaire regarding the participation of children in their classrooms in the larger school program was distributed to all eighteen teachers of Doubly-Handicapped classes during the last month of the school year (See Appendix E). Thirteen teachers had returned the questionnaires by the end

of the school year (June 30, 1973). The lack of response from the remaining five excluded 35 children (26% of the total) from the data. The results were tabulated as to the number of children in the class who were participating and the number of those who were not (See Table 8).

Because the activities which may be considered integration within the larger school program varied from school to school and to some degree, from class to class, interviews with teachers were conducted during site visits as to what integration had been accomplished. Interviews were also conducted with principals and assistant principals of the schools in the program. Only one principal was unavailable for questioning during the entire investigation period.

Observations were made during the site visits to determine from visual evidence what modes of integration were occurring.

Objective VI

The sixth objective given in the proposal to be evaluated was that 80% of the pupils will have improved in socialization and maturation.

From the proposal:

Subjects - 100% of the pupils

Methods and Procedures - The TMR performance Profile will be recommended to assess the level of social maturity along with the teachers' anecdotal and cumulative records. Observations will be made and questionnaires and interviews will be conducted inclusive of parents.*

Statistical and Qualitative Analysis - Frequency distributions, percentages and pre-post comparisons will be made on the same children.

Time Schedule - The scale selected to assess social maturity will be administered to the same pupils during the first two and last two weeks of the program. Questionnaires and interviews (inclusive of parents) will be conducted during the last two weeks along with the final inspection of pupil records.

The TMR Performance Profile, an evaluative scale of pupil performance, was completed by teachers based upon their observations for one hundred sixteen pupils in all eighteen Doubly-Handicapped classes during the period

* Modification was made to use the TMR Performance Profile for assessment rather than the Vineland Social Maturity Scale. A letter concerning the replacement was sent to the Division of Research and Evaluation of the State Education Department by the Bureau of Educational Research at the request of the Program Coordinator.

December 18, 1972 through March 16, 1973. Scores from this assessment period were considered the pre-scores (acutally ratings). The TMR Performance Profile was again completed on the same basis for one hundred nineteen children in all Doubly-Handicapped classes during the period April 26, 1973 through May 27, 1973. These scores were considered the post scores. The number of completed profiles differed from the total number of children who had been placed in the eighteen classes because teachers felt the content of the profile to be inappropriate for some of their students because of their physical and other impariments and because of transfers from the program, hospitalizations and new placements. Thus, 100% of the student population could not be used as the sample. For analysis, only those children who could be matched for pre-and post-scores were used in the sample. Approximately 79.5% of the students population was included in the sample.

The TMR Performance Profile consisted of several distinct areas of performance, most of which were irrelevant to this study. Therefore, to assess improvement in social-maturity skills the profile of the Social Behavior area was used. The pre-and post-scores for one hundred five children (N = 105) were analyzed by a correlated t test, p .05, for mean differences to determine improvement. A frequency distribution (See Table 9) was compiled of all pre-post-scores. The percentage of those children whose post-scores were greater than their pre-scores (improvement) as well as the percentages of those whose post-scores showed no change or were less than their pre-scores was computed (See Table 10).

A Parent Questionnaire was devised and mailed to the residence of one hundred thirty-two children who had been involved in the program since March, 1973 and had continued through June, 1973. The questionnaire consisted of eight questions pertaining to the progress the child has made in social skills and interacting with others. This questionnaire was the second portion of the Parent Questionnaire of which self-help questions comprised the first part (See Appendix A). The Spanish version also contained this social skills assessment (See Appendix B). Parents were given two weeks in which to return the completed questionnaire. Forty-seven of the completed questionnaires had been received at the end of the period, thus N = 47 was regarded as the sample for determining improvement from the parents' perspective in the social maturity area. Percentages of positive, negative and undetermined responses from the parents were computed (See Table 5). The sample from the questionnaire consisted of children whose disabilities were muscular dystrophy 3; cerebral palsy 15; could not be determined 25; cardiac disorder 1; cleft palate 1; and brain-injured and/or seizures 2. The responses of both Spanish and English speaking parents were included in the same table.

All teachers were interviewed during site visits and their opinions concerning the improvement they had seen in their pupils from the time they first arrived to the present were obtained. However, most teachers did not keep anecdotal records and the pertinent information these records might have contained was largely unavailable.

Observations of the children's abilities interacting with others and social skills were also made during visits to the classrooms.

# Chapter III

## RESULTS

### Objective I

As explained in the section, Evaluation Objectives - Methods and Procedures - Chapter II, the evaluation for the objective, 100% of the children on the waiting list will be screened for placement was impossible to implement according to the methods and procedures given in the proposal. Reasons for this are also outlined in the section previously referred to. Table 1 is based on a February - March waiting list which does not take into account the 99 children placed prior to February 1, 1973.

Table 1: Determination of Percentage of Children Screened From a Single Waiting List

| Date of List | Number Formally Screened | Number Not Formally Screened | Total Number Listed | Percentage Screened |
|---|---|---|---|---|
| Feb - March | 20 | 110 | 130 | 15% |

### Objective II

Evaluation of the objective that 80% of the children on the waiting list will be accepted was also impossible to implement according to the methods and procedures given in the proposal. Reasons for this failure and explanations are given in Chapter II, Evaluation Objectives - methods and Procedures. Table 2 is based on a February - March waiting list which does not take into account the 99 children placed prior to February 1, 1973.

Table 2: Determination of Percentage of Children Accepted from a Single Waiting List

| Date Of List | Total Number Listed | Number Accepted | Number Not Accepted | Percentage Accepted* |
|---|---|---|---|---|
| Feb - March | 130 | 13 | 117 | 10% |

### Objective III

The third objective from the proposal was: It is expected that 80% of the pupils will improve in self-help skills.

Results:

The t-test of mean differences (correlated t-test):

Table 3

Pre and Post TMR Performance Profile Scores: Self-Care Area

| Variable | N | Mean | S.D. | t | alpha |
|---|---|---|---|---|---|
| Self-Care Score (Dec. 1972-March 1973) | 104 | 74.932 | 34.349 | 2.108* | .05 |
| Self-Care Score (April-May 1973) | 104 | 78.711 | 86.891 | | |

Results shown in Table 3 support the intended outcome of this project in self-help. Post scores were significantly higher than pre-scores. A greater variability of post scores reflected in the higher S.D. value indicates a widening of within-group achievement differences. This points to a differential in the progress of each child while in the program as judged by his teacher. The fact that many children are gaining in this area from the program is clear.

Table 4, a frequency distribution of the pre-post scores, exhibits the improvement of the children given in the sample with their scores arranged in intervals of ten points. The change in scores for those children whose post-assessment score was less than ten points greater than their pre-assessment scores, however, will not be clear from the table. A greater amount of change might have occurred if the length of time between the pre-assessment and post-assessment period had been longer (See Tabe 4).

Table 5

Improvement in Scores
from TMR Performance Profile
Self-Care Area N = 104
(Percentages)

| Decreased | | No hange | | Improved (Post-Scores Greater than Pre-Scores in Self-Care Area) | |
|---|---|---|---|---|---|
| N | % | N | % | N | % |
| 36 | 35% | 3 | 3% | 65 | 62% |

Table 4
Frequency Distribution
Changes in TMR Performance Profile
Pre and Post Interval Scores
Self-Care Area N = 104

| Pre-Test Scores | Post-Test Scores 5-15 | 16-26 | 27-37 | 38-48 | 49-59 | 60-70 | 71-81 | 82-92 | 93-103 | 194-114 | 115-125 | 126-136 | 137-147 | 148-158 | 159-169 | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5-15 | 1 | | | | | | | | | | | | | | | 1 |
| 16-26 | | 2 | | 1 | | | | | | | | | | | | 3 |
| 27-37 | | | 3 | 4 | 1 | 1 | | | | | | | | | | 9 |
| 38-48 | | | 1 | 4 | 3 | 1 | | 1 | | | | | | | | 10 |
| 49-59 | | 1 | | 6 | 7 | 2 | | | 1 | | | | | | | 17 |
| 60-70 | | | | | 2 | 3 | 3 | 2 | | | | | | | | 10 |
| 71-81 | | | | 1 | 1 | 2 | 3 | | 2 | 2 | 1 | 1 | | | | 12 |
| 82-92 | | | | | 2 | 2 | | 4 | 3 | 3 | 1 | 1 | | | | 16 |
| 93-103 | | | | | 3 | | | | 2 | 3 | | | 1 | | | 9 |
| 104-114 | | | | | | | | | | 1 | 3 | | | | | 4 |
| 115-125 | | | | | | | | | | | 2 | 1 | | | | 3 |
| 126-136 | | | | | | | | | | | | | 3 | | | 3 |
| 137-147 | | | | | | | | | | | | | 1 | 2 | | 3 |
| 148-158 | | | | | | | | | | | | | | 2 | | 2 |
| 159-169 | | | | | | | | | | | | | 1 | 1 | | 2 |

In the proposal, improvement of 80% of the pupils in self-help skills as determined by the TMR Performance Profile would be considered positive evidence of attainment of the evaluative objective. 80% was also the percentage for attainment of the program objective. Though these objectives were not met for the 104 children included in the sample ( 62% improved) it can be concluded that there is a positive trend of improvement for at least half the children in the program. The fact that 100% of the children in the program was not assessed blurs any conclusion that can be derived from the evidence in regard to the proposal objective. The fact that some children were not assessed because of their incapacities also distorts conclusions. The instrument used, the TMR Performance Profile, does not consider physical handicaps but only severe and moderate mental retardaion. A few children probably were marked lower due to degeneration or loss of some physical capacity as well as being entirely excluded from the assessment because of these factors. Also, because the TMR Performance Profile is based on the teacher's observations and judgment of a child's performance, the reasons why a child might have received a lowered post-test score cannot accurately be determined. An example of the difficulty in obtaining a 100% sample and lack of clarity in results was one child who was considered too distractible to be tested for one test during the pretest period but scored significantly when given that test during the post-test period.

Table 6: Parent Questionnaire:

Improvement in Self-Care and Social Behavior of Doubly-Handicapped Children
Parent Responses N=47

| Questions | Responses | | N = 47 | |
|---|---|---|---|---|
| Part I. Self-Care Area | Yes | No Response | No | Per cent of Yes Responses |
| 1. Is he able to keep himself clean? | 37 | 1 | 9 | 79% |
| 2. Does he try to dress himself? | 43 | 0 | 4 | 91% |
| 3. Can he take care of his belongings such as his toys, clothes and notebook better? | 42 | 0 | 5 | 89% |
| 4. Does he seem more able to protect himself from dangerous things around the house as electrical wiring, poisonous household products? | 37 | 2 | 8 | 79% |

| | | | | |
|---|---|---|---|---|
| 5. Has his ability to feed himself improved? | 44 | 0 | 3 | 94% |
| 6. Is he able to provide his own grooming needs as combing his hair, brushing his teeth and washing his hands before eating? | 40 | 0 | 7 | 85% |
| 7. Does he clean up after himself when he has made a mess? | 39 | 0 | 8 | .83% |
| 8. Is he more able to take care of his toilet needs? | 40 | 1 | 6 | 85% |
| Part II. Socialization and Maturity | | | | |
| 1. Does your child respond more to the affection shown or given him? | 43 | 1 | 3 | 91% |
| 2. Is your child more able to control his temper? | 33 | 2 | 12 | 70% |
| 3. Is he able to obey and do what you asked him to do? | 41 | 0 | 6 | 87% |
| 4. Does it seem that your child is more able to make friends? | 43 | 0 | 4 | 91% |
| 5. Is he more able to make decisions for himself as what he wants to wear; what and where he wants to play? | 42 | 0 | 5 | 89% |
| 6. Have you noticed that your child tries to talk more with the family? | 47 | 0 | 0 | 100% |
| 7. Does he take part in family activities as offering to do things around the house as cleaning-up, washing dishes, and sweeping? | 29 | 1 | 17 | 62% |
| 8. Can your child now give affection--does he treat others well? | 41 | 1 | 5 | 87% |

Questionnaire:

The results of the Parent Questionnaire, Self-Care area, distributed among parents of the children in the classes for the Doubly-Handicapped program gave evidence of the attainment of the objective. From the sample of forty-seven respondents, it was clear that from the parents' perspective, their children have improved in self-help skills and are benefiting from the program in this area. To most of the questions, over 80% of the parents in the sample responded favorably. The lowest incidence of favorable response resulted from questions concerning the abilities of the child to keep himself clean and to protect himself from dangerous things around the house which may be functions of the child's low intellect and/or physical disability. For example, a child may attempt to dress himself in some way but attentiveness to and care for his appearance may be beyond his interest or perception. A lack of knowledge of what is dangerous would certainly be a factor in his desire to protect himself.

Interviews and observations:

During the site visits to all classrooms, the following information was gathered.

Site Visits:

Generally, the teachers expressed the view that all their pupils had made some improvement in self-help skills. Some of those who had not improved were largely physically degenerating or were simply unable to do so. Though some children had their medicine administered by teachers with parents' and doctors' permission) others did so themselves. One teacher remarked of the difficulty in instructing self-dress. One class had worked on fastening buttons. The teachers make deliberate efforts to facilitate self-help in routine activities. Indications of self-help were observed as:

1. Nearly 100% of the children could feed themselves as observed during the lunch periods and did so appropriately.

2. The children engaged in clearing tables, putting their garbage and food containers away and washing their dishes as well as setting the tables.

3. The children had learned to routinely wash their hands before and after eating.

4. Most of the children were able to care for their toilet needs. Some would independently decide that they wanted to use the restrooms. Those who were in wheelchairs, of course, were provided with an escort.

5. Children were observed in helping each other as wheeling the chair of a fellow student, feeding one another, and even supporting one another in classroom recitation.

6. Children were given responsibility for caring for their notebooks and homework.

7. Opportunities were provided where the children were responsible for unlocking classroom doors upon returning to classes, opening and closing classroom doors.

8. In one school, the pupils were observed cooking and preparing their lunch under supervision.

9. In one case, a wheelchair bound child had learned to support himself from the chair. In many instances, children who were in wheelchairs or on crutches were able to accommodate and aid their own mobility.

10. The pupils in one particular class were observed putting away their blocks after play.

11. In a few classes, the pupils handled tape recorders in making tapes; cameras, in taking pictures; phonographs while listening to records.

OBJECTIVE IV

The fourth objective from the proposal was: It is expected that 20% of the pupils will improve in academic skill or by indicating significant positive trend of improvement.

Results shown in Table 7 support the intended outcome of this project that a significant positive trend of improvement be indicated. Students showed an average growth of 7.75 points over a period of five months. Post scores were significantly higher than pre. Interestingly enough, though the average of post scores increased over the average of pre scores, the SD value was less for the post score group indicating less within-group achievement differences. This suggests the generality of emphasis on readiness skills among the classes in the program.

Table 7

Pre and Post Inventory of Readiness Skills Scores N = 98

| Variable | N | Mean | S.D. | t | alpha |
|---|---|---|---|---|---|
| Readiness Score (February 1973) | 98 | 58.918 | 25.014 | 6.976 | .01 |
| Readiness Score (May 1973) | 98 | 66.663 | 24.034 | | |

Table 8
Frequency Distribution
Change in Inventory of Readiness Skills
Pre and Post Scores N = 98

| | Post-Test Scores* | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 9-19 | 20-30 | 31-41 | 42-52 | 53-63 | 64-74 | 75-85 | 86-96 | 97-107 | Totals |
| 9-19 | 3 | 2 | 2 | 1 | | | | | | 8 |
| 20-30 | | 3 | 2 | 2 | 1 | | | | | 8 |
| 31-41 | | 2 | 4 | 2 | | | 1 | | | 9 |
| 42-52 | | | 1 | 4 | 3 | 6 | 1 | | | 15 |
| 53-63 | | | | 3 | 1 | 3 | 3 | 1 | | 11 |
| 64-74 | | | | | | 6 | 5 | 3 | | 14 |
| 75-85 | | | | | | 1 | 9 | 7 | 1 | 18 |
| 86-96 | | | | | | | | 12 | 1 | 13 |
| 97-107 | | | | | | | | 1 | 1 | 2 |

* Scores are in intervals of ten.

Table 8, a frequency distribution of the pre-post scores, reflects the improvement of the pupils in the sample with their scores arranged in intervals of ten points. The change in scores for those children whose post-test score was less than ten points greater than their pre-test score, however, will not be clear from the table (See Table 8).

From the proposal, the expectation was that 20% of the pupils will improve in academic skills. This was considered positive evidence of attainment of program and evaluation objectives. Table 9 shows that this rate was exceeded by 54 percent. The percentage of pupils who improved in this area was 74%. The effectiveness of pre-readiness instruction which is emphasized throughout the program is highly evidenced. It can be concluded that the objective was attained though the sample did not include 100% of the pupils. However, the percentage of those children in the sample who did improve exceeded that of the objectives, generalizations of positive trends of improvement can be made. Furthermore, had the remaining pupils who were not tested decreased in scores, the percent of those children who improved would have been 55%. This exceeds the desired percentage of the program and evaluation objectives.

Table 9

Improvement in Scores from the Inventory of Readiness Skills N=98

| Decreased | | No Change | | Improved (Post-Scores Greater than Pre-Scores in Readiness Skills) | | |
|---|---|---|---|---|---|---|
| N | % | N | % | N | % | |
| 21 | 22% | 4 | 4% | 73 | 73 | 74% |

Observations:

During site visits, the following information was obtained:

Though the academic emphasis tended to be on prereadiness, variations and deviations from this orientation were observed:

1. One class watched a television production of Sesame Street which appeared effective. One school had access to a media room where films could be viewed.

2. Most classes focused on the experiential - knowledge of birthdate, address of residence, ages, names, telephone numbers.

3. Body image, awareness of body parts was emphasized.

4. Basic instruction as family members, the alphabet, days and months of the year, colors, knowledge of numbers, identifying objective, reading to the class was emphasized in all classes.

5. All the pupils had access to speech therapists.

6. In several classes, particularly on the junior high level, reading and writing were part of the curriculum. Some pupils were comparatively accomplished in these areas. Mathematics were also extended to these groups. One junior high school class has the services of remedial reading, math and learning disabilities specialists.

7. Development of motor skills through toys and games, arts and crafts was included in nearly all classes.

8. In one junior high school class, a few students were taking typing lessons. One student is fairly accomplished in this area.

9. A few classes had access to music instruction.

OBJECTIVE V

The fifth objective from the proposal was: It is expected that 100% of the pupils will participate in the larger school program.

Table 10: Teacher Questionnaire

Number of Participants and Non-Participants in the Larger School Program

| Class (coded) | Number Non-Participant | Number Participant | Total |
|---|---|---|---|
| A | 0 | 9 | 9 |
| B | 0 | 4 | 4 |
| C | 0 | 3 | 3 |
| D | 0 | 10 | 10 |
| E | 0 | 9 | 9 |
| F | 0 | 9 | 9 |
| G | 0 | 6 | 6 |
| H | 8 | 1 | 9 |
| I | 0 | 9 | 9 |
| J | 6 | 0 | 6 |
| K | 8 | 0 | 8 |
| L | 0 | 10 | 10 |
| M | 0 | 10 | 10 |
| Totals | 28 | 70 | 98 |

The table above shows, from the teachers' perspective, that over half of the children in the project are participating in the larger school program. The table should be regarded in connection with interviews and observations of integration within each school and class because "participation in the larger school program" varies in its definition thoughout the program. Also, only 74% of the students were included in the analysis. The following interviews and observations give a clearer picture of what teachers as well as administrators felt "participation in the larger school program" was and why they felt their students were or were not being integrated. However, it is clear that 100% percent participation goal was not reached.

Interviews and Observations:

The following information was obtained during visits to each school and classroom in the program.

Interviews with Principals and Assistant Principals

The principal or assistant principal of each school was met for a brief discussion of the integration of the classes in the program into the larger school program. Their opinions and views were as follows:

School #1

The assistant principal suggested use of the school library for the DH-classes in that it was on the same floor as the classes. He also was willing to try to devise other situations.

School #2

The principal expressed concern that the children in DH-classes could not use the gym and library because these facilities are on upper floors. They can only use the basement. He also stated that the DH-classes attend assemblies and he wanted the classes to put on an assembly. The children could not participate in the regular lunch program because it was already too crowded. Special arrangements had been made for the DH-classes such as a ramp and special rooms where other classes had met were vacated for the DH-classes. The principal had several criticisms of the program. He felt that there had been no real teacher training program; that the program should be under the physically-handicapped program which he wished to recommend. He described the limited association with the other children in the school because the children in the DH-classes arrive late and depart early. Their places of entrance and exits are different from those of the others. The physical plant is a barrier. He felt that the biggest short-coming was that the children did not receive sufficient services of social workers, psychiatrists, physical and occupational therapists and of medical professionals. He expressed the view that his school was used because it was the only place having space. His feeling was that he had to reorganize the entire school for the DH-classes.

School #3

The assistant principal described several facets of integration. The children in the regular school program tutor the pupils in the DH-class. The school seeks to integrate the DH-class in every way possible according to this assistant principal. Special programs, dedication programs are attended and participated by the class. Next year the plan is to get them to work as monitors and to get them into classrooms where they can meet standards within their abilities.

The non-special-ed teachers know the philosophy of the school in regard to classes such as the DH-class and in-service training is being provided for them to help the DH-class and other facets of special education projects. The children in the DH-class use the facilities of the industrial arts, library and science areas. The administration emphasizes ecology and considers the DH-class as human ecology.

School #4

The principal had concerns before the program started, but finds that the children in the DH-classes are highly accepted. The Girl Scout and Cub Scout troops involve other students from CRMD and BI-classes. He does not perceive a great deal of integration yet there is no isolation. The DH-classes attend assemblies at their age levels and eat lunch with other children in the school during the lunch hour. He was satisfied with what the teachers had done for the children in DH-classes both physically and mentally. Two ramps were installed and bars were installed in the lavatories. The children in the DH-classes participate in fire drills. He spoke of the Parent Workshops which he saw as a means for exchanging information. The supervisor of CRMD has been asked to become involved in patterning organization in each DH-class.

A science teacher teaches the children in the DH-classes one period a week and the librarian has them one period a week. There are some long range plans for having children in DH-classes take other classes. He feels the major limitation is their confinement to the first floor of the school. He also expressed the view that the unusual teaching technique of one teacher in the program has brought about more learning on the part of parents and staff of the school.

School #5

The principal described many aspects of integration at this school. Monitors and helpers from the 5th grade classes help in dismissal of the children in DH-classes and are used in various ways for the classes in the morning and afternoon. The DH-classes attended a school dance festival. They eat lunch with other special education classes and attend school assemblies. Generally, the children in the DH-classes participate in extracurricular activities, school projects and are helped by the school PTA. Ideas for the future were not developed because he felt the program would be temporary. The librarian has provided books for the DH-classes and other provisions are made for children

in the program. He also visits the DH-classrooms. This principal saw close rapport among the DH-class and other CRMD classes.

School #6

The principal did not appear highly involved with the DH-classes. He reported that the classes attended some assemblies, ate in the lunchroom with other groups of children and tended to work independently.

School #7

An assistant principal (administrator of special education class) described the integration of the DH-classes in this school tersely. The DH-classes are accepted as a class among the many others of the school. Facilities and classrooms were provided. The teachers promote integration of the DH-classes. They are involved as much as possible in the larger school setting. He saw disadvantages in using the teachers of the DH-classes outside class periods. He had no plans because the DH-classes, with regard to limitations, are treated as regular classes.

School #8

The principal was unavailable for an interview. No other administrator was encountered.

Interview with Teachers and Observations

School #1

One child in a DH-class was participating in a school project. In one class, children from the regular classes come to the class to tutor the children. The three DH-classes in this school no longer eat lunch together because the children really did not interact with each other well. Birthday parties had been tried among the classes. The DH-classes go outside together and on field trips. The classes participate in fire drills. On the playground, the children in the classes do not usually play with their children in the regular classes. The principal visit the classes twice a week and was interested in having the classes in assemblies.

It was observed that integration was achieved by:

1. Teachers from regular classes allow some of their children to work with children in one of the DH-classes. These children were eager to help, were cooperative and protective. (Children from CRMD classes also work with children in DH-classes).

School #2

One teacher expressed her feelings that the principal of the school had shown insufficient interest in the DH-classes. Art and music instruction were asked for by the teachers. The DH-classes have music class with other special education classes.

An observed incidence of integration was the attendance of the DH-class at the school's award assembly. The children seemed attentive and both classes sat together with other special education classes.

School #3

The teacher reported that the children in the DH-class at this school use the services of the school nurse and doctor. The woodshops, metalshops of the school are used to make repairs for the unit. The children in the DH-class also attend the shops and develop projects. Children from regular classes join the class and volunteer in many ways to help the DH-class mumbers.

This school has extensive integration which is facilitated by the presence of elevators which the pupils in the DH-class use to move about various areas in the school. Thus, they are not confined to the first floor. The school also has a special education unit which provided the DH-class with many services as a learning specialist, remedial reading and math, one occupation therapist, a resource teacher and a speech therapist.

Observed incidents of integration included:

1. The class was invited to a tree planting, one child and the teacher attended.

2. One student was in a chorus and was rehearsing for a school assembly.

3. The class used the school lunchroom and ate with other CRMD children.

4. The rehearsal for the assembly was briefly attended by the class.

5. The cooking unit was a part of the routine. An occupational therapist from the school gave instruction to the class in preparing a meal.

School #4

The teachers feel segregated and isolated. The two DH-classes are combined for science lessons, library sessions and snacks. The school gym had also been used by the classes.

Observed incidents of integration included:

1. One DH-class was combined with members from the BI-class for Cub Scout activities. The other class was combined with members from CRMD classes for Girl Scout activities. All were to participate in a school festival and were rehearsing for such.

2. The science teacher from regular classes instructed the class in a science lesson.

3. Lunch was eaten in the school lunchroom with the regular school population.

School #5

The P.T.A. at this school had a gathering and parents of the children in the program were included. Children had taken school photos.

Observed incidents of integration included:

1. The monitors from the regular classes made themselves available to the DH-classes for various tasks.

2. The DH-classes gathered in the lunchroom with other special education classes for lunch.

School #6

The teachers explained that the classes had been to one assembly during the year. They had been invited to another but could not attend. All four DH-classes meet together to view films in the schools' multimedia room. Because some children in the DH-classes arrive late and depart early, they miss assemblies and school activities.

Observed modes of integration included:

1. The DH-classes assemblied in the media room to watch a cartoon.

2. The classes gathered in the lunchroom with other special education classes for the lunch period.

Note: One child at this school is participating in other classes in the school simply because he is intellectually able to do so.

School #7

The DH-classes use the ceramic shop, the occupational skill shops and under the supervision of the school's personnel for these areas. One teacher has used the school's family worker to help one of his students as well as the school's substitute teacher. The children use the school gym. Several of the students attend the regular typing classes. The school's music teacher is to attend one class and teach piano. The school nurse helps the children in emergencies. Students from other classes play and work with the children in the program. The DH-classes have music instruction with a regular class twice a week. The classes attend assemblies and have been invited to school activities.

The classes in this school had extensive integration into the larger school program. Observed incidents of integration included:

1. The DH-classes had lunch with the rest of the school population during the lunch period.

2. Students from the music department visited one class and played instrumental selections for the class and gave information about their instruments.

School #8

The classes use the library facilities. The teachers explained that next year, the physically-handicapped specialists from another program in the school will be serving the DH-classes. The teachers also explained that much effort was required by them in order to use the school gym. The principal rarely visited the classes and has little contact with them. Though the school has elevators, integration is minimal. The assembly hall is near the DH-classes but they have not attended nor been invited. This site, however, is relatively new.

Observed incidents of integration included:

1. The children in the DH-classes gathered in the lunchroom with children of other special education programs.

2. The two DH-classes had combined for a play period.

3. The children in the classes had a recess period with the rest of the school population (there was no playground activitiy with them, however).

OBJECTIVE VI

The sixth objective from the proposal was: It is expected that 80% of the pupils will have improved in socialization and maturation.

Results :

The t-test of mean differences (correlated t-test):

Table 11

Pre and Post TMR Performance Profile Scores:
Social Behavior Area N=105

| Variable | N | Mean | S.D. | t | alpha |
|---|---|---|---|---|---|
| Social Behavior Score (Dec. 1972-March 1973) | 105 | 89.971 | 32.293 | 3.243 | .01 |
| Social Behavior Score (April-May 1973) | 105 | 98.295 | 30.510 | | |

Results shown in Table 11 support the intended outcome of this project that improvement in socialization and maturity be produced. Post scores

Table 12
Frequency Distribution
Change in TMR Performance Profile
Pre-Post Scores Social Behavior Profile
Area

| | Post-Test Scores* | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0-10 | 11-21 | 22-32 | 33-43 | 44-54 | 55-65 | 66-76 | 77-87 | 88-98 | 99-109 | 110-120 | 121-131 | 132-142 | 143-153 | 154-164 | Total |
| 0-10 | | | | | | | | | | | | | | | | 0 |
| 11-21 | | | | | | | | 1 | | | | | | | | 1 |
| 22-32 | | | | | 1 | | | | | | | | | | | 1 |
| 33-43 | | 2 | | | | | 1 | | 1 | | | | | | | 4 |
| 44-54 | | | | | 1 | 2 | | | 1 | 3 | 1 | | | | | 8 |
| 55-65 | | | | | | 1 | 3 | 1 | | | | | | | | 5 |
| 66-76 | 1 | | | | | 2 | 2 | 3 | 3 | 2 | | 1 | | 1 | | 15 |
| 77-87 | | | | | | | 3 | 4 | 4 | 5 | 1 | | | 2 | | 19 |
| 88-98 | | | | | | 2 | | 3 | 4 | 2 | 6 | | | | | 19 |
| 99-109 | | | | | | 2 | | 2 | | 1 | 2 | | 1 | | | 9 |
| 110-120 | | | | | | | | | | 2 | 1 | 1 | 1 | | | 5 |
| 121-131 | | | | | | | | | | 1 | 1 | | | | | 2 |
| 132-142 | | | | | | | | | | | 1 | 3 | 2 | 1 | | 7 |
| 143-153 | | | | | | | | | 1 | | 1 | | 2 | 1 | | 5 |
| 154-164 | | | | | | | | | | | | | 1 | 2 | 2 | 5 |

*Scores are given in intervals of ten.

were significantly higher than pre-scores with an average increase of 8.32 points over 3-5 months. the decrease in the variability of the post assessment scores may be reflective of the many opportunities available in the school program to provide and enhance social skills. The gains made in this area are a significant positive trend.

Table 12, a frequency distribution of the pre-post scores, exhibits the improvement of the children given in the sample with their scores arranged in intervals of ten points. The change in scores for those children whose post score was less than ten points more than their pre-score, however, will not be clear from the table. A greater amount of change might have resulted if the length of time between the pre-assessment and post-assessment period had been longer.

Table 13

Improvement in Scores from TMR Performance Profile
Social Behavior Area

(Percentages)

| Decreased | | No Change | | Improvement (Improved in Scores--greater than Pre-Scores in Social Behavior Area) | |
|---|---|---|---|---|---|
| N | % | N | % | N | % |
| 38 | 36% | 1 | 1% | 66 | 63% |

The improvement of 80% of the pupils in socialization and maturation as determined by the TMR Performance Profile would be considered positive evidence of attainment of the evaluative objective. Had the remaining pupils who were not tested been assessed with total decrease in scores, the percent of those children who did improve would have been 55%. This would surpass the percentage specified in the evaluation objectives.

Eighty percent (80%) was also the percentage for attainment of the program objective. Though these objectives were not met for the 105 children included in the sample - 63% improved - it can be concluded that there is a positive trend of improvement for at least half the children in the program. Again, conclusions are blurred in regard to the program objective in that 100% of the children could not be included in the sample. The inapplicability of the instrument, the TMR Performance Profile; the exclusion of severely impaired children from testing; and the relative subjectivity in scoring the TMR Performance Profile major areas all contribute to the lack of clarity in conclusions from the data.

Questionnaire:

The results of the Parent Questionnaire, Socialization and Maturity area, distributed among parents of the children in the program yielded supported evidence in the attainment of the objective (See Table 6). From the samples of forty-seven respondents, it seems clear that from the parents' perspective, their children have improved in social skills and are benefiting from the program in this area. For most of the questions, over 80% of the parents in the sample responded favorably. The lowest incidence of favorable response resulted from questions concerning the child's participation in family activities, sharing in household chores and the child's ability to control his temper. The question concerning participation in household chores is somewhat less meaningful for children who are physically disabled. The control of temper issue may be related to the adjustment difficulties of doubly-handicapped children. It also may suggest parental bias which is inherent in any such questionnaire.

Interviews and Observations:

During the site visits to all classrooms, the following information was obtained.

Site Visits

Generally, the teachers felt that all their pupils had improved, some markedly so, in socialization and maturity. Some children, upon entering the program hid in closets, manifested depression, talked to no other person, showed abusive and aggressive behavior towards others and were in other ways, withdrawn. Many teachers expressed emphasis on social skills and numerous opportunities for the enhancement of such skills were provided. An example of remarkable progress was one child at a junior high school who upon beginning the program, appeared aphasic. However, during the visit to the class, he was seen as quite verbal, responding to questions in class and conversing with his classmates adequately.

Observed instances of socialization and maturation included the following:

1. Nearly all pupils were encouraged to greet visitors and introduce themselves. This was done appropriately. In some instances, pupils greeted the site visitor personally and asked her name. A few exhibited much courtesy in asking her to eat, escorting her to the lunchroom.

2. In some schools, Boy Scout and Girl Scout troops have been organized or are in the process of being organized for DH-classes. In one class, the girls were wearing official scout uniforms. Another class had an official scoutmaster.

3. General interaction seemed relatively low for the younger pupils but among older pupils, particularly in the junior high schools, teasing, close friendships, calling each other by first names, initiating conversation with adults as well as fellow students had occurred.

4. Children were able to follow the class routines automatically.

5. Even severely disabled pupils attempted to participate in games and group play.

6. Table manners had been acquired by nearly all the children.

7. Many children seemed quite enthusiastic in helping their peers as in wheeling their wheelchairs voluntarily.

8. The children showed development of autonomy and self-awareness in getting things for themselves and expressing their needs.

9. Nearly all pupils showed proper classroom decorum and seemed to function well within the classroom setting. A few children who seemed emotionally disturbed could not adjust well.

10. The pupils in some classes were able to play in groups or pairs. In one junior high school the pupils had engaged in a ball game (team play) and had collected in groups talking with one another during a recreation period.

11. Some of the children openly demonstrated affection. For the most part the pupils appeared to be happy and contented and gaining from simply being involved in the school experience.

12. The classes in one school were observed in making a trip to a nearby shopping center to buy ice cream for a birthday party.

13. A few children in some of the schools were greeted and known by children in other classes. One girl in a junior high school who had reportedly been kept very isolated at home was seen as initiating a new friendship with a student from the regular classes during an assembly.

## Chapter IV

## SUMMARY AND RECOMMENDATIONS

### CONCLUSIONS

The major conclusions of this study relevant to the attainment of the program and evaluation objectives are as follows:

Objective I:

It is expected that 100% of the children on the waiting list will be screened for placement.

The evaluation for Objective I was not possible for implementation because of the unavailability of appropriate waiting lists. Also, 74% of the total

number of children in the program had already been placed before the first authorized waiting list was available. This waiting list for the period of February - March was used to give an example of intended procedures. From this list, fifteen (15) percent have been screened.

Objective II:

It is expected that 80% of the children on the waiting list will be accepted.

The evaluation for Objective II was also not possible for implementation for reasons given previously for Objective I. Investigation from the major waiting list available would not have been feasible in assessment of this objective in that 74% of the children who are in the program had already been placed before the availability of this list. This waiting list for February - March was again used in an example of intended procedures for this objective. From this list ten percent were already accepted.

Objective III:

It is expected that 80% of the pupils will improve in self-help skills.

It was impossible to obtain a 100% sample for this assessment. However, a substantial sample of 104 children was obtained. A t-test, $p < .05$, showed significant difference in the means of the pre and post scores. The mean of the post scores was greater ( $\bar{X}$ pre = 74.9; $\bar{X}$ post = 78.7). This indicated a positive trend of improvement in self-help skills. 62% of the childre sampled improved. This was at least half of the total number of children in the program. 3% of the children sampled showed no change and 35% decreased in scores. The fact that the objective was not met for 80% of the pupils is related to the lack of a 100% sample, however, some children who were not assessed were considered by teachers as too impaired for the assessment. It is more related to the tool used in that many items of the TMR Performance Profile (Self-Care Area) do not consider physical handicaps. Furthermore, because remedial services as physical therapy were unavailable to these children, the effects of their untreated physical impairments were more likely to impede progress in self-help skills.

The questionnaire sent to parents (47 were received during the final period) indicated from their perspective that the children in the program have improved in this area.

Interviews with teachers and observations have also supported this perspective. Some children have made marked improvement.

Objective IV:

It is expected that 20% of the pupils will improve in academic skill or by indicating significant positive trend of improvement.

The t-test, $p < .01$, showed significant difference between the means of the pre-test ($\bar{X}$ pre = 58.9) scores and of post-test scores ($\bar{X}$ post = 66.7). The indication was that a positive trend of improvement in academics was accomplished. The percent of students sampled (N = 98) who improved was 74%, exceeding that for the objective by 54%. This was 55% of the children in the program, including those who were not tested. This is the clearest area indicating overall improvement. The effectiveness of the classroom situation is indicated by these results.

According to teacher interviews and observations, a few children were actually beginning to write and read as well as achieve lower level mathematics.

Objective V:

It is expected that 100% of the pupils will participate in the larger school program.

Statistical analysis was not used in this evaluation. A questionnaire sent to the eighteen teachers (thirteen were received) indicated, from the teachers' perspective, that over half of the children in the program were participants in the larger school program. It appeared that integration had different meanings in different schools. Some school administrators and teachers, from the interviews, seemed to have regarded integration in the larger school program as a function of integration with other CRMD or special education classes. Only in some schools did the children in the program eat lunch with the regular school population. In most instances, however, integration was accomplished by the attendance of the DH-classes to school assemblies, use of the school lunchroom and facilities and, of course, participation in fire drills. The most extensive forms of integration tended to be found in the junior high schools where interaction with the children from the larger school population was more prevalent.

A few problem areas exist in a few of the schools where the classes are highly segregated and isolated and where communication with the school administration is poor.

Objective VI:

It is expected that 80% of the pupils will have improved in socialization and maturation.

It was not possible to obtain a 100% sample for this assessment. A substantial sample of 105 children was obtained. A t-test, $p < .01$, showed significant differences in the mean of the pre-score ($\bar{X}$ pre = 89.97) and the mean of the post-score ($\bar{X}$ post = 98.3). This indicated a positive trend in socialization and maturation. Sixty-three percent of the children sampled improved. This was at least half of the children in the program, including those who were not tested. One percent of the children sampled showed no change in the scores and 36% of them decreased in their

scores and 36% of them decreased in their scores. The fact that the objective was not met for 80% of the pupils is related to the lack of a 100% sample but more so to the inappropriateness of some items of the TMR Performance Profile (Social Behavior) for severely physically impaired children. This is associated, too, with the fact that the children in the program have received little or no remediation for their physical handicaps.

The questionnaire sent to parents (47 were received during the final period) indicated from their perspective that the children in the program have improved in this area.

Interviews with teachers and observations made during site visits fully support this perspective. Marked improvements have been made by some pupils.

RECOMMENDATIONS

It is recommended by the TLRC evaluator that the classes for the Doubly-Handicapped program be funded for the 1973 - 74 school year. Despite the lack of peripheral services which the program is in immediate need of, the children have shown progress, particularly in the academic (readiness) area. The program is functioning well considering severe shortages of personnel and limited funds. Other recommendations:

I. Evaluation

1. The instrument for the assessment of self-help skills and socialization-maturity has been considered inappropriate for physically impaired children (TMR Performance Profile). Though no test instrument will be 100% valid for 100% of the pupils, other scales might be considered. Suggestions are the Adaptive Behavior Scale and Doll's Social Maturity Scale. The Inventory of Readiness Skills is apparently useful for evaluating the academic progress of the children in the program because it reflected the effectiveness of the curriculum used in the classes.

2. The between testing period should consist of a longer interval, i.e. pre-testing should begin at the first part of the year and post-testing at the end of the year as suggested in the design to give a clearer picture of actual improvement. What the children had obtained from the program as opposed to what they brought to the program is more reflective of improvement than what was gained over a period of a few months while being in the program.

II. Objectives

1. The concept, participation of the children in the larger school population needs clarification. Efforts should be made to integrate the children in DH-classes not only with other special education classes but with the regular school population. In cases where the communication

lags between the teachers and administrator, the program coordinator could serve to produce some kind of compromise. Places where true integration can be encouraged are:

a. Lunchroom schedules with the larger school population.
b. Playground periods and appropriate games with the regular students.
c. The use of other instructors in the school for the children in the DH-classes.
d. Schedule helpers from other classes as monitors, tutors in DH-classes.
e. Presentation of projects, exhibits and assemblies by members of DH-classes.
f. Parents of children in DH-classes should also be invited to attend P.T.A. meetings.
g. The DH-classes should be able to use personnel within the schools as learning specialists.

Some of these activities exist in a few schools but not all.

2. The use of appropriate and capable volunteers and college students should be maximized in the program. An example of this is that graduate students in psychology could be used to test the children for periodic intellectual and behavioral assessments.

3. The low salary offered for the occupational and physical therapists positions is one barrier to their placement. A supplementary salary should be offered by the program because of the importance of these positions even at the extraction of lesser needs.

4. The paraprofessionals in some classes could be used more effectively. Teachers should be reminded to use them to capacity.

III. Staff

1. It is unquestionable that medical services, physical therapy, occupational therapy and psychiatric services are needed in the program. The absence of a sufficient number of personnel in the mental health area has affected screening procedures which were delayed; the unavailability of psychologicals and medical reports to teachers; psychological services for the children.

a. Physical and occupational therapists are needed not only because of remediation of handicaps but to obtain necessary equipment for the children and to instruct or to provide in-service training or workshops for the teachers. Most of the teachers have little or no training for the understanding or servicing the physical aspects of the children. One teacher explained she did not even know what equipment to order for the children.

b. More psychologists, social workers, family workers are needed because, 1) psychological assessments of these children should be made periodically

and be up-t-date. They should also be available to teachers when the child is placed in her class. 2) Some of the children are emotionally disturbed, and require treatment. 3) Interaction with parents in the workshops and otherwise should be extended; 4) screening procedures are good but thoroughness is impossible with a limited staff. A few children who should not have been in the program or in certain classes were placed. As given in a previous evaluation, a trial basis should be instituted. The intake procedure is very effective and should be continued.

2. The program coordinator suggested that a resource teacher be hired in units with at least 4 classes. This should be followed through.

3. Because a number of children have to be hospitalized some further mental health or social work follow-up should be provided. Supplementary tutoring through some related program must be feasible.

IV. Curriculum

1. Because a number of the children are maturing physically, some form of sex education should be provided and other aspects of this nature. A few teachers of older students had mentioned some discussion of dating or the intention to do so. Anecdotal records should be kept by all teachers.

V. Equipment

1. Equipment for basic classroom instruction was available for all schools except the newest one. Hoewever, more equipment is needed for remedial purposes. Though specified in the design, science objects such as fish tanks and caged animals were absent from classrooms. A few classes had plants. Typewriters are also needed.

VI. Busing

1. The busing schedule for the coming school year has been submitted early enough to evade many of the problems incurred this year. However, new busing arrangements need to be made for one particular school where the teachers have to alter their hours and school activities are missed because of the bus schedule.

VII .Sites

1. If DH-classes are moving to another school site they should be moved to a school which has a single story or elevators. These characteristics seem to facilitate integration of the classes within the schools.

VIII.Other Concerns

1. Teachers and staff should be made aware beforehand of evaluation procedures and demands by the Bureau of Educational Research.

## IX. Implementation of the Program

1. The program has definite positive trends in developing the academic and social aspects of the children. However, because the child must be considered a whole and the physical defects dampen the ability of the child to grow intellectually and otherwise, the primary concern of the program should be in achieving a balance of physical and mental abilities. From a conference with the program coordinator, the program will not be expanded extensively for the coming year. It is suggested that intensification of the existing program is needed if extension is not anticipated.

## Appendix A

### Parent Questionnaire

To the Parents:

Your child has been a participant in a special class designed especially for him, during the year. Your judgment of his improvement in interacting with others, his general maturity, and his ability to take care of himself is needed.

The following questions are to be answered by you based on what you have seen of your child's behavior since he has been in school. Please circle yes if you have seen any improvement in your child's behavior and circle no if you have not seen any improvement since he has been in school.

Self-Help

| | | |
|---|---|---|
| 1. | Is he able to keep himself clean? | YES NO |
| 2. | Does he try to dress himself? | YES NO |
| 3. | Can he take care of his belongings such as his toys, clothes and notebook better? | YES NO |
| 4. | Does he seem more able to protect himself from dangerous things around the house as electrical wiring, poisonous household products? | YES NO |
| 5. | Has his ability to feed himself improved? | YES NO |
| 6. | Is he able to provide his own grooming needs as combing his hair, brushing his teeth and washing his hands before eating? | YES NO |
| 7. | Does he clean up after himself when he has made a mess? | YES NO |
| 8. | Is he more able to take care of his toilet needs? | YES NO |

Socialization and Maturity

1. Does your child respond more to the affection shown or given him? YES NO
2. Is your child more able to control his temper? YES NO
3. Is he able to obey and do what you asked him to do? YES NO
4. Does it seem that your child is more able to make friends? YES NO
5. Is he more able to make decisions for himself as what he wants to wear; what and where he wants to play? YES NO
6. Have you noticed that your child tries to talk more with the family? YES NO
7. Does he take part in family activities as offering to do things around the house as cleaning-up, washing dishes, and sweeping? YES NO
8. Can your child now give affection--does he treat others well? YES NO

TEACHING & LEARNING

Appendix B

Escuela: _____

A los Padres de Familia:

Su nino ha sido clasificado en un groupe para clases especiales, las cuales han sido pianeadas con el fin primordial de ayudar a los ninos en este nivel educative.

La opinion suya acerca del avance de su nino para comunicarse con etres, su abililidad para valerse por si misme y su madurez en general es muy importante en la evaluacion de esta investigacion.

Por favor conteste las preguntas continuacion, las cuales estar basadas en la conducta de su nino durante el presente periodo escolar. Si ud cres que el ha tenido algun progreso dibuje un circule en la palabra Si; pere si ud. cree lo contrasio, dibu je el circulo en la palabra No.

(A vuelta de corre, antes de 23 June).

Questionario

Destrezos que el nino ha logrado desa rollar:

| | | | |
|---|---|---|---|
| 1. | Puede su nine cuidar de su aseo personal por si mismo? | Si | No |
| 2. | Ha aprendids su nino a vestirse sin la ayuda de otros? | Si | No |
| 3. | Puede su nino cuidar de sus cosas personales toles come cuadermos, juguetes, ropa, etc? | Si | No |
| 4. | Itene su nino precaucion de los abjetos peligresses en el hogar, per ejemple los alambres del alumbrads electrice, productes de limpieza, fesferes, etc? | Si | No |
| 5. | Ha oprendide su nino a comper por si mismo? | Si | No |
| 6. | Ha adquirido su nino olgunos habites de limpieza, por ejemplo lavarse las manos antes de comer, peinarse los cabellos, cepillarse los dientes etc? | Si | No |
| 7. | Puede su nino impiar cuando derrama un liquide o ensucia algo? | Si | No |
| 8. | Puede su nino atendes sus necesidades sanitarias, como per ejemplo ir al bano? | Si | No |

Relaciones sociales y su madurez en general.

1. Su nino se porta y siente mejor cuando ud. y los otras personas le tratar bien? Si No

2. Es su nino capaz de controlar su temperamente? Si No

3. Obedece su nino las ordenes que ud. le da? Si No

4. Es su nino emistese, puede el hacer amigos? Si No

5. Puede su nino tomas decisiones por si mismo? Si No

6. Cree ud. que shosa su nino conversa mas con sus familia ses que antes de ir a la escuela? Si No

7. Esta su nino participando en alguna de las actividades del hogar tlees come barrer, lavas les plates, poner algunos objetos en su lugar? Si No

8. Ha adjuirido su nino algunes habitos de cortesia? Por ejemple daludas a las otros personas, ser of ectuese o carinoso con los demas? Si No

TEACHING & LEARNING

Appendix C

Frequency Matrices
Changes in Prereading Assessment Pre-Post
Scores for One Doubly-handicapped Class

Part I Language Assessment* N = 5

| Pre-Test Scores | Post-Test Scores** 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 | | | | | | | | | | | | 1 | 1 |
| 22 | | | 1 | | | | | | | | | | 1 |
| 23 | | | | | | | | | | | | | 1 |
| 24 | | | | | | 1 | | | | | | | |
| 25 | | | | | | | | | | | | | |
| 26 | | | | | | | | | | | | | |
| 27 | | | | | | | | | | | | | |
| 28 | | | | | | | | | 1 | | | | 1 |
| 29 | | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | |
| 31 | | | | | | | 31 | | | | | 1 | 1 |
| 32 | | | | | | | | | | | | | |

* Score is number of items correct.
**Of five children, all showed discernible improvement.

Part II Visual Discrimination Assessment* N = 3

| Pre-Test Scores | Post-Test Scores** 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | | | | | | | | | | | | | 1 | 1 |
| 17 | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | 1 | 1 |
| 21 | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | | | |
| 26 | | | | | | | | | | | | 1 | | 1 |
| 27 | | | | | | | | | | | | | | |
| 28 | | | | | | | | | | | | | | |

* Score is number of items correct.
**Of 3 children, all showed discernible improvement.

TEACHING & LEARNING

Appendix D

Chart of Pre-Post Test Scores for Pre-reading Assessment
(One Doubly-Handicapped Class)

| Part I Language Assessment N = 7 on register | | | Part II Visual Discrimination | |
|---|---|---|---|---|
| Student (Coded) | Pre-Test Score | Post-Test Score | Pre-test Score | Post-Test Score |
| A | 22 | 23 | -- | 28 |
| B | 31 | 32 | 16 | 28 |
| C | 21 | 32 | -- | 25 |
| D | 24 | 26 | 26 | 27 |
| E | 28 | 29 | 20 | 28 |
| F | -- | -- | -- | 22 |
| G | unavailable | | unavailable | |

The results of a t-test of dependent observations for Part I (Language Assessment) showed significance for a t of 2.28, p .05. It can be concluded from the chart that the children in this one Doubly-Handicapped class did improve in language abilities who were included in the sample (71%).

The results of a t-test of dependent observations for Part II (Visual Discrimination Assessment) showed significance for a t of 2.18 p. 10. It can be inferred that at least 1/2 of the pupils in this one Doubly-Handicapped class did improve in visual discrimination tasks. However, the sample is a biased one in that those who were unable to perform for the test, did not take it and were excluded from the sample. Also, both samples are too small to yield clear results.

Appendix E

Teacher's Name_____

School Address_____

Dear Teacher:

Please confirm whether or not each child in your class is participating in the larger school program. Include all children listed in your record regardless of their attendance. If you have any children who do not participate, please give the total number of these non-participants and those who do participate.

Thank you for your immediate response.

Yours truly,

Paula Owens
Evaluator
Doubly-Handicapped